1. A method for constructing a conic peak-point curve with a computer comprising the steps of:

    (vi)   selecting a start point, a_0;

    (vii)   selecting an end point, a_1;

    (viii) selecting a start tangent direction, e_0;

    (ix)   selecting an end tangent direction, e_1; and

    (x)   selecting a distance of a peak point, p from the chord between the start and end points where the peak point is a point on the curve that is farthest away from the chord lying on a centerline segment connecting the center of the chord with a intersection point t of rays extending in the start and end tangent directions e_0, e_1 respectively from the start and end points a_0, a_1.

2. A method for constructing a conic point-point curve with a computer comprising the steps of:

    (v)   selecting a start point, a_0;

    (vi)   selecting a start tangent direction, e_0; and

    (vii)   selecting a peak point, p, whereupon

    the computer system displays a guide area for locating possible end points loci defined by two rays intersecting at a point s that lies on one of the two rays that extends from the start point a_0 in the direction of the peak point p at twice (2X) the distance of the peak point p from the start point a_0, the remaining ray extending from s in a direction opposite to the start tangent direction e_0,

    (viii) selecting any point in the guide area as an end point a_1 of the curve, whereupon

    the computer, using any suitable mathematical formulae then constructs a curve passing through the start point, a_0, peak point, p, and the end point a_1, where the end tangent

direction e_1 is derived from a point of intersection of start and end tangents that coincides with the intersection of start tangent and a centerline extending through the center of a chord between the start and end points a_0, a_1, and through the peak point, p.

3. A method for constructing of a conic point-tangent curve with a computer comprising the steps of:

    (vi)   selecting a start point, a_0;

    (vii)   selecting a start tangent direction, e_0;

    (viii)   selecting an end point, a_1;

    (ix)   selecting an end tangent direction, e_1; and

    (x)   selecting a fixed weight, w for the curve, whereupon

the computer, using any suitable mathematical formulae, then constructs a curve passing through the start point, a_0, and the end point a_1, where the input weight w is a parameter defined as a proportion between a distance of a peak point p from a center point q of a chord between the start and end points a_0, a_1 and a distance of the peak point p from an intersection point t of the start and end tangents.

4. The method of claim 3 wherein the selected fixed weight is a fixed cos-weight v, an arbitrarily defined positive parameter that utilizes a multiplication factor such as a trigonometric cosine relationship for computing a weight that limits a permitted range of peak points of the possible curves.

5. A method for constructing a conic point curve with a computer comprising the steps of:

   (v) selecting a start point, a_0;

   (vi) selecting a start tangent direction, e_0; and

   (vii) selecting an end point, a_1, and

   (viii) selecting a fixed weight, w, for the curve, whereupon

   the computer, using any suitable mathematical formulae, then constructs a curve passing through the start point, a_0, and the end point a_1, where an end tangent direction e_1 is automatically set by selected pre-defined program parameters.

6. The method of claim 5 wherein the selected fixed weight is a fixed cos-weight v, an arbitrarily defined positive parameter that utilizes a multiplication factor such as a trigonometric cosine relationship for computing a weight that limits a permitted range of peak points of the possible curves.

7. A method for constructing a conic curvature curve with a computer comprising the steps of:

   (vii) selecting a start point, a_0;

   (viii) selecting a start tangent direction, e_0; whereupon

   the computer displays a guideline perpendicular to the start tangent direction, e_0 for the center m_0 of the start curvature circle, r_0;

   (ix) selecting a center m_0 of the start curvature circle r_0 on the displayed guideline; and

   (x) selecting an end point a_1; and

   (xi) selecting an end tangent direction, e_1.

   the computer, using any suitable mathematical formulae, draws a conic curve through the start and end points a_0, a_1, with respective start and end tangent directions of e_0, e_1 with the

center m_0 of the start curvature circle r_0 and the center m_1 for the end curvature circle r_1 which are automatically determined.

8. A method for constructing a class of point curvature curves including cubic Bezier curves and conics with a computer comprising the steps of:

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   (iv)   selecting a start point, a_0;

   (v)   selecting a start tangent direction, e_0; whereupon

   the computer displays a guideline perpendicular to the start tangent direction, e_0 for the center m_0 of the start curvature circle r_0;

   (vi)   selecting a center m_0 of the start curvature circle r_0 on the displayed guideline; and

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   (xii)   selecting a end point a_1,

   the computer, using any suitable mathematical formulae, then constructs a curve passing through the start and end points a_0, a_1, with start tangent direction e_0 and center m_0 of the start curvature circle r_0 where an end tangent direction e_1 is automatically set by selected pre-defined program parameters.

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9. The method of claim 8 wherein the constructed curve is a conic and a center m_1 of an end curvature circle r_1 are automatically determined.

10. The method of claim 8 wherein the constructed curve is a cubic Bezier curve, and a center m_1 of the end curvature circle r_1 is set by a selected defined program parameter.

11. A method for constructing of a Bezier point-tangent curve with a computer comprising the

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steps of:

   (i)   selecting a start point, a_0;

   (ii)   selecting a start tangent direction, e_0;

   (iii)   selecting an end point, a_1;

(iv)   selecting an end tangent direction, e_1; and

(v)   selecting a fixed weight, w for the curve, whereupon

the computer, using any suitable mathematical formulae, then constructs a curve passing

through the start point, a_0, and the end point a_1, and a peak point p calculated to lie on a

5   centerline segment connecting a center point q of the chord between the start and end

points a_0, a_1 with an intersection point t of the start and end tangents, where the input

weight w is a parameter defined as a proportion between a distance of a peak point p from

the center point q of a chord and a distance of the peak point p from the intersection point t

of the start and end tangents.

10   12. The method of claim 11 wherein the selected fixed weight is a fixed cos-weight v, an

arbitrarily defined positive parameter that utilizes a multiplication factor such as a

trigonometric cosine relationship for computing a weight that limits a permitted range of

peak points of the possible curves.

13. A method for constructing a Bezier point curve with a computer comprising the steps of:

15   (ix)   selecting a start point, a_0;

(x)   selecting a start tangent direction, e_0; and

(xi)   selecting an end point, a_1, and

(xii)   selecting a fixed weight, w, for the curve, whereupon

the computer, using any suitable mathematical formulae, then constructs a curve passing

20   through the start point, a_0, and the end point a_1, where an end tangent direction e_1 is

automatically set by selected pre-defined program parameters.

14. The method of claim 13 wherein the selected fixed weight is a fixed cos-weight v, an arbitrarily defined positive parameter that utilizes a multiplication factor such as a trigonometric cosine relationship for computing a weight that limits a permitted range of peak points of the possible curves.